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N.D.

**DRAFT-SUBJECT TO
CHANGE**

WORKSHEET FOR HAZARDOUS WASTE
SITE RANKING MODEL

153431

GENERAL

Site name and location: Cahokia / Dead Creek
St. Clair Co., Sangre, IL
Date(s) of site scoring: 2/16 - 2/17/82

Primary source(s) of information (e.g., EPA region, state, FIT, etc.):

IEPA file - Cahokia / Dead Creek General file

IEPA report. "A Preliminary Hydrogeologic Investigation in the
Northern Portion of Dead Creek & Vicinity" Ron St. John (4/81)

Factors not scored (assigned 0 for additive and 1 for multiplicative)
due to insufficient information:

- St. John has copy @ office →
- Waste quantity - could estimate the depth of contaminated soil, length of creek bed in hydrogeologic study, along with average width - because contaminated soil would be removed in cleanup operations
 - Check SW intakes from Mississippi w/in 3 mi downstream
 - Air sampling needed

Comments or qualifications:

- Need Air quality work done (may or may not be fruitful)
- Need further GW study in area to determine depth of contamination, determine leachate plumes, etc in total area
- Need Hazardous waste quantity (do not think it is possible due to past history of the area)
- Creek does not always flow due to road construction upstream; see IEPA report of 4/81 - St. John's
 - if possible take further SW samples up & down stream

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GROUND WATER PATHWAY

[1] Measured Level or Evidence of Release

Describe substance(s) and nature of release:

Corresponds to
waste of several
industries in the
area

{ PCB's, Chloro amiline, Dichlorobenzene, Copper, Manganese, Lead,
Cyclohexane, Chlorophenol, aliphatic hydrocarbons, silver, nickel,
arsenic, cadmium - Found in monitoring wells placed by IDPA

Describe method of measurement or observation:

Lab analysis in report "A Preliminary Hydrogeologic Investigation in the
Northern Portion of Dead Creek & Vicinity" by Ron St John - 4/81
Analysis pp 34-39

[2] Depth to Aquifer of Concern

Describe/name aquifer of concern:

Why is above aquifer of concern?

Depth and how determined, including sources:

Net Precipitation

Net precipitation and how determined, including source(s):

Permeability of Unsaturated Zone

Soil type(s) in unsaturated zone:

Permeability and how determined, including source(s):

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[3] Containment

Method of waste management (e.g., surface impoundment, landfill, etc) of extreme case:

Describe basis for selecting extreme case:

Describe method(s) of waste or leachate containment for above extreme case:

Cite source(s) of information:

[6] Physical State

Physical state of waste and source of information:

Liquid - St John's report

Persistence

Most persistent compound subject to transport via ground water:

PCB's

Basis for selecting compound, including source(s):

Lab Analysis From H₂O & soil samples taken in the area of concern

Basis for selecting persistence rating score:

Mike persistence report

Toxicity/Infectiousness

Toxic materials subject to transport via ground water and Sax or NFPA level for each:

PCB → Sax's toxicity

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Cite source(s) of information indicating toxics present on site:

St. John's report

Infectious materials present on site and source(s) of information:

Basis for selecting CDC classification of infectious materials:

7 Total Waste Quantity

Total waste quantity present, including unit of measurement (e.g., tons, cubic yards drums): 0-3 ft deep in contaminated soil.

$3 \times 2000 \times 8 = 48,000 \text{ ft}^3$
2000 ft length of creek bed
8 ft width

Basis for estimating or computing quantity, including source(s) of information: from St. John's report - depth of contaminated soil length & depth from topo map (if you use soil as waste)

UNKNOWN - AREA HAS BEEN USED AS SEVERAL LANDFILLS SINCE 1937 AND NO RECORDS ON AMOUNT HAS BEEN KEPT.

8 Ground Water Use

Use(s) of aquifer of concern and source(s) of information:

Industrial use - IL water Survey
Mississippi River another source (i.e. limited H₂O sources)

Distance to Nearest Well Downgradient

Distance to nearest well downgradient:

Adjacent - Munro's well upgradient to GW flow but causes cone of depression in water table, thus contaminated well

How was downgradient direction(s) established, including source(s) of information:

IL State Water Survey (ISWS)
W to SW

How was distance determined?:

ISWS

Is nearest building known to be using ground water? Source of information:

No, not nearest bldg.

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Is nearest well known to be drawing from aquifer of concern? Source
of information: *yes. 7 SWS*

Population Served by Ground Water Within 3-Mile Radius

Population served with 3-mile radius: *14*

How was population counted or computed, including source(s) of
information: *Drinking well was drilled for Industrial Truck Supply
E. St. Louis 1960 per 7 SWS*

Is population known to be served by aquifer of concern? Source of
information: *yes, 7 SWS*

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SURFACE WATER PATHWAY

[1] Measured Level or Evidence of Release

Describe substances and nature of release:

Contaminants deposited directly into creek waters - Lab analysis of creek downstream & certain company holding ponds show contamination of the same type

Describe method of measurement or observation:

St. John's report of 4/81 previously cited

[2] Site Slope and Terrain

Computation of slope and description of points of measurement:

Cite source(s) of information (topo maps, etc.):

1-Year 24-Hour Rainfall

Amount of rainfall and source of information:

Distance to Surface Water

Distance and description of points of measurement:

Cite source(s) of information:

Flood Potential

In what flood plain, if any, is the site located?:

Cite source(s) of information:

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[3] Containment

Describe basis for selecting extreme waste management case:

Describe method(s) of waste or leachate containment for extreme case:

Cite source(s) of information:

[8] Surface Water Use

Use(s) of downstream surface water and sources of information:

Recreation - children play in creek

Critical Habitats

Location and description of downstream critical habitat, if any:

W/in 100 yr floodplain

Distance and description of points of measurement:

Cite source(s) of information:

USGS floodplain maps

Population Served By Surface Water with Water Intake Within 3 Miles Downstream from Site

Population served by water intake(s): 0

Is surface water within 3 miles in a tidal estuary?: No

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Description(s) and location(s) of intake(s) and corresponding
population served by each:

How was population counted or computed?:

Cite source(s) of water-intake and population information:

IL. Public Water Supply

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AIR PATHWAY

1 Evidence of Release

Describe contaminant and monitoring which reveal that background levels have been exceeded?:

No air sampling done

Cite source(s) of information:

IEPA file has pictures of smoldering creek bed, but
no air quality data

3 Physical State/Volatility

Physical state of waste and source(s) of information:

Liquid - St John's report

Vapor pressure of waste and source(s) of information:

Reactivity

Reactive substances and source(s) of information:

Dichlorobenzene from NFPA = 2 React.

NFPA level for each and basis of selection:

Incompatibility

Incompatible substances which are present and source(s) of information:

None that were found in analysis - still unknowns

Pictures of smoldering creek bed in IEPA file

Basis for selecting incompatibility score:

St. John's Report 4/61

IEPA file

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[5] Distance to Nearest Population

Distance and description of points of measurement:

w/in 1/4 - houses adjacent to creek on the SE

Cite source(s) of information:

Topo map & 4/61 IEPA report (cited)

Population Within 1-Mile Radius

Population and how counted or computed:

>10,000 : towns of Cahokia, Centreville, & Sauget,
w/in 1 mile radius

Cite source(s) of information:

topo map & pop. chart

Land Use

Location and type of determining land use:

Ag. - adjacent creek bed on west side

Ind. - " north < 1/4 mile

Res. - " SE

Distance to determining land use:

Topo map, IEPA photo

Cite source(s) of information:

IEPA photo & files